

Supplementary Table. Isotope dilution mass spectrometry analysis of predrawn syringes containing opened vaccine product collected during on-site visits to company A — Kentucky, December 2018*

Vaccine ID number	Product type [†]	Vaccine (lot number) [expiration date]	Hemagglutinin antigens (HA) Subtypes ^{§,¶}			
			H1 ($\mu\text{g}/\text{mL}$)	H3 ($\mu\text{g}/\text{mL}$)	B(v) ($\mu\text{g}/\text{mL}$)	B(y) ($\mu\text{g}/\text{mL}$)
1	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	15.7	20.9	26.0	27.2
2	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	Below LOQ	Below LOQ	Below LOQ	Below LOQ
3	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	16.0	21.0	29.1	28.3
4	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	Below LOQ	Below LOQ	Below LOQ	Below LOQ
5	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	18.7	25.7	35.1	37.2
6	Opened product	FluZone Quadrivalent (UI982AC) [06/30/19]	8.7	11.7	14.8	16.9
—	Control	SanofiFluzone (UI982AA KPNW) [06/19]	28.1	40.8	51.8	54.8

Abbreviation: LOQ = limit of quantification.

* Isotope-dilution mass spectrometry was performed in triplicate on retains of the six predrawn FluZone vaccines.

[†] Collected vaccine during onsite visits included opened, accessed multidose vials and predrawn syringes by company A staff.

[§] A peak at 76 kiloDaltons representing the four hemagglutinin antigens (HA) was used to determine potency, with spectra from each of the predrawn syringes, compared with that from an intact bottle of Sanofi Pasteur FluZone used as a positive control.

[¶] The lower LOQ is 1.1 $\mu\text{g}/\text{mL}$.